Claims:

1. A method in a direct conversion receiver for processing received radio signals that are modulated and centered at a carrier frequency, the modulation extending a sideband above and below the carrier frequency, the method comprising the steps of:

- mixing a local oscillator frequency signal with said received radio signals for generating baseband frequency signals;
- filtering out generated disturbing direct current (DC) components of said baseband signals centered at the zero frequency;
- setting said local oscillator frequency signal equal to the carrier frequency plus an offset frequency, said offset frequency being equal to or about the difference between the carrier frequency and a null frequency, said null frequency centered at a notch of said sideband; and
- centering said notch at the zero frequency of said baseband signals through mixing.

2. A direct conversion receiver for processing modulated radio signals that are centered at a carrier frequency, the modulation extending a sideband above and below said carrier frequency, the receiver comprising:

- a means for receiving and splitting said signals, said means having a first signal output and a second signal output;
- a local oscillator means tuned to a local oscillator frequency and having a first frequency output and a second frequency output, said second frequency output having a phase shift compared with said first output;
- a first mixer means coupled to said first signal output and first frequency output for generating baseband frequency in-phase signals;

- a second mixer means coupled to said second signal output and second frequency output for generating baseband frequency quadrature phase signals;
- a first filtering means for the suppression of said in-phase signals centered at the zero frequency;
- a second filtering means for the suppression of said quadrature signals centered at the zero frequency;

wherein the local oscillator frequency is set equal to the carrier frequency plus an offset frequency, said offset frequency being equal to the difference between the carrier frequency and a null frequency, said null frequency centered at a notch of said sideband, for centering said notch at the zero frequency of said baseband signals through mixing.

3. A direct conversion receiver according to claim 2, wherein for channel selection said receiver further comprises a third filtering means for the suppression of said in-phase signals being greater that a set corner frequency; and a fourth filtering means for the suppression of said quadrature signals being greater that a set corner frequency.

4. A direct conversion receiver according to claim 2, wherein said first filtering means comprises a first AC coupling means for producing a notch at the zero frequency of said in-phase signal; and said second filtering means comprises a second AC coupling means for producing a notch at the zero frequency of said quadrature signal.

5. A direct conversion receiver according to claim 2, wherein said first and second filtering means each comprise a high pass filter coupled to the output of a mixer.

6. A direct conversion receiver according to claim 2, wherein said receiver further comprises a processor system for demodulation and processing said in-phase and quadrature signals and for controlling said local oscillator frequency.

7. A GPS direct conversion receiver for processing phase modulated radio signals that are centered at a carrier frequency for receiving digital information, the phase modulation extending a sideband above and below the carrier frequency, the receiver comprising:

- a means for receiving and splitting said signals, said means having a first signal output and a second signal output;
- a local oscillator means tuned to a local oscillator frequency and having a first frequency output and a second frequency output, said second frequency output having a 90° phase shift compared with said first output;
- a first mixer means coupled to said first signal output and first frequency output for generating baseband frequency in-phase signals;
- a second mixer means coupled to said second signal output and second frequency output for generating baseband frequency quadrature phase signals;
- a first filtering means for the suppression of said in-phase signals centered at the zero frequency;
- a second filtering means for the suppression of said quadrature signals centered at the zero frequency;

wherein the local oscillator frequency is set equal to the carrier frequency plus an offset frequency, said offset frequency being equal to or about the chip rate or a multiple of it for centering said local frequency at a notch of said sideband, and for centering said notch at the zero frequency of said baseband signals through mixing.

8. A GPS direct conversion receiver according to claim 7, wherein said first filtering means comprises a first high pass filtering means for producing a notch at the zero frequency of said in-phase signal; and said second filtering means comprises second high pass filtering means for producing a notch at the zero frequency of said quadrature signal.

9. A method in a direct conversion receiver for processing modulated radio signals that are centered at a carrier frequency, the modulation

extending a sideband above and below the carrier frequency, the method comprising the steps of:

- receiving and splitting said signals into first signal output and second signal output;
- tuning a local oscillator frequency for generating a first frequency output and a second frequency output, said second frequency output having a phase shift compared with said first output;
- mixing said first signal output and first frequency output for generating baseband frequency in-phase signals;
- mixing said second signal output and second frequency output for generating baseband frequency quadrature phase signals;
- filtering out in-phase signals centered at the zero frequency; and
- filtering out quadrature signals centered at the zero frequency;
- setting said local oscillator frequency equal to the carrier frequency plus an offset frequency, said offset frequency being equal to the difference between the carrier frequency and a null frequency, said null frequency centered at a notch of said sideband; and
- centering said notch at the zero frequency of said baseband signals through mixing.

10. A method according to claim 9, wherein the method further comprises the steps of high pass filtering said in-phase signal for producing a notch at the zero frequency of said in-phase signal; and high pass filtering said quadrature signal for producing a notch at the zero frequency of said quadrature signal.